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Heartburn drugs increase risk of pneumonia, study finds

ANDRÉ PICARD — PUBLIC HEALTH REPORTER

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Prescription drugs commonly used to treat heartburn and other gastrointestinal woes can sharply increase the risk of contracting pneumonia, new research shows.

The findings about stomach-acid-suppressing drugs are important because the medications are prescribed to 40 to 70 per cent of hospital patients. Bacterial pneumonia is a common hospital-acquired infection, and one of the leading causes of patient death.

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“The potential impact of acid-suppressive therapy on the risk of pneumonia is of great importance to public health,” said Chun-Sick Eom of the department of family medicine at the Seoul National University Hospital in South Korea.

Writing in Tuesday’s edition of the Canadian Medical Association Journal, Dr. Eom estimated that one in 200 hospital patients taking the drugs develops pneumonia. “A considerable burden of morbidity and mortality of hospital-acquired pneumonia may be attributable to this type of therapy,” he said.

The number of people contracting pneumonia outside the hospital setting – where they are not monitored or treated quickly – “could be even more serious,” he added.

There are two principal forms of acid-suppressing drugs: proton pump inhibitors (PPIs) and histamine-2 receptor antagonists (H2RAs).

The drugs are used to treat gastroesophageal reflux disease (GERD), reflux esophagitis and peptic ulcer disease. They are also used to eradicate *Helicobacter pylori*, a bacterium that causes ulcers, and to prevent and treat ulcers caused by routine use of medications such as painkillers.

The drugs suppress stomach-acid levels, but stomach acidity is a key defence mechanism against all sorts of microbes. Thus, users become more vulnerable to infections.

That is not a big concern to otherwise healthy individuals, but poses a great danger to the frail elderly and others with compromised immune systems.

Dr. Eom said the important message in the new findings is that “clinicians should carefully consider any decision to prescribe acid-suppressive drugs, especially for patients who are already at risk for pneumonia.”

PPIs and H2RAs are among the most prescribed medications in the world, with international sales topping \$26-billion (U.S.) a year.

Earlier research from the Canadian Institute for Health Information found that more than one in five Canadians over 65 are taking proton pump inhibitors.

The big sellers include pantoprazole (brand name Pantoloc), esomeprazole (Nexium) and lansoprazole (Prevacid). The best know H2RA medication is ranitidine (Zantac.)

The new research is a meta-analysis, a compilation and analysis of previously published studies. The research team included 35 studies in the analysis.

It found that people taking PPIs had a 27 per cent increase in the risk of contracting pneumonia, while those taking H2RAs had a 22 per cent increase. According to the study, 19.7 cases of pneumonia occur in every 1,000 hospital patients not receiving acid-suppressing drugs. That increases to 25 cases per 1,000 patients who are taking the drugs.

Dr. Eom said the most striking increase in the risk of pneumonia was observed in the first week of using the medications. Previously, most safety concerns have revolved around long-term use.

In addition to the increased pneumonia risk, the medications have been associated with a higher risk of hip fractures, heart attacks and infections with *Clostridium difficile*.